



Tyson Foods, Inc.

Glen Allen Processing Plant

Odor Control Management Plan

Tim Crum, CEM
Updated 12/06

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1.0 INTRODUCTION

The goal of this odor control management plan is to eliminate community complaints about odor and the perception that the Glen Allen Processing Plant is a source of perceived nuisance odors. In accordance with 9 VAC 5-40-140, this plan outlines program policies, procedures and best management practices (BMP's) to reduce the occurrence of odor complaints from the community surrounding the plant. A copy of the Virginia regulation governing odor can be found in *Appendix A*.

Tyson Foods, Inc. has developed procedural and mechanical controls to ensure a safe and sanitary work place. Established controls and procedures are designed to ensure compliance with all state, federal, and local regulations, as well as Tyson Policies. These programs are audited continuously by government inspectors as well as internal and external divisions and agencies. Trash, litter, debris, raw, intermediate, finished, and waste materials are managed continuously to prevent and minimize the potential for release to the environment. Established Food Safety Guidelines, Good Management Practices, and Safe Sanitation Operating Procedures prohibit the accumulation of materials that could contaminate finished product and/or product work surfaces. By effectively managing facilities, materials, and processes in accordance with these established programs we inherently manage the activities and processes that may produce perceived nuisance odors.

2.0 PROGRAM RESPONSIBILITIES

The Complex Environmental Manager (CEM) is responsible for communicating the Program to the Odor Control Team and affected Department Managers. The CEM is responsible for maintaining documentation of all Program Components, as well as keeping the Program current. The CEM will maintain documentation, not to be less than 3 years. The CEM is also the primary point of contact for receiving and tracking odor complaints, and communicating Program information to concerned citizens and government officials.

Each affected Department Manager is responsible for maintaining their assigned Area in accordance with established food safety and sanitation programs, environmental regulations, along with Best Management Practices established for this Program.

3.0 ODOR CONTROL TEAM

The Odor Control Team is composed of Department Managers and Plant Management. The team is responsible for following BMP's established in this plan and maintaining their department in a manner to prevent the occurrence of nuisance odors.

The team is also responsible for investigating and mitigating complaints received by the surrounding community or the Virginia Department of Environmental Quality (VDEQ).

The Odor Control Team members are as follows:

Tim Crum, Complex Environmental Manager – Program/Team Leader

Bryan French, Plant Manager

Frank Stokes, Waste Water Treatment Plant Manager (WWTP)

Harold Crawford, Pet Food Department Manager

DeWayne Morgan, Evisceration Department Shift Manager

Jeffrey Duke, General Production Shift Manager

4.0 TEAM MEETINGS

The Odor Control Team will meet at the beginning of each warm weather season, typically between March and April to review the contents of this plan and the BMP's established for each department. The team will re-evaluate the BMP's to determine their effectiveness in odor control or suggest updates in light of any changes in plant operations. The team will also re-establish their commitment to odor nuisance control.

The team remains in constant contact throughout the year, and any odor concerns or improvements will be addressed at the weekly manager's meeting or special meeting at the request of the Complex Environmental Manager.

5.0 ODOR COMPLAINTS

The CEM is the primary point of contact for receiving odor-related complaints. Historically, odor complaints have been received from residents in proximity to the plant or from the VDEQ. VDEQ may receive odor complaints from nearby residents. VDEQ then contacts the Plant, providing notification of the received complaints and to request any information as to the source.

Team members receiving complaints, observations, and/or comments for a perceived nuisance odor that is **on going**, should immediately notify the CEM, Plant Manager or any other member of the Odor Control Team. Contact Information can be found in *Section 8*.

If the perceived nuisance odor is **not on going**; i.e., the complaint is received after the fact, this must be documented via e-mail or phone correspondence to the CEM as soon as practical.

6.0 ODOR COMPLAINT INVESTIGATION

If a nuisance odor is perceived as “**on going**”, then, one or more member(s) of the Team (or direct report) will conduct an inspection of the facilities to determine the source of perceived nuisance odor. Corrective action(s) to eliminate the source of the perceived nuisance odor **do not require** CEM or Team participation. Each member of the Team is authorized to take whatever measure(s) are deemed appropriate and practical to mitigate or eliminate the source. Team members have authority to implement mechanical and/or procedural changes to stop the source or activity identified as the source.

If a source and/or activity is identified, and there is **no known corrective action** or if corrective action is not practical, then the reasons for this will be documented. In any event, all complaints will be investigated and followed up by the CEM and, if necessary, the Team. If the cause and/or source are determined to have the potential to reoccur, then the Team will meet to discuss options and/or need for procedural and/or mechanical controls to prevent reoccurrence.

In order to provide access to plant management after plant hours, the following outlines how complaints received at the plant should be handled: During the working week, Monday through Friday there is at least one member of the odor control team onsite between 06:00 and 23:59. Saturday and Sunday are the only two days when there may not be someone at the plant. All phone calls received during these hours are forwarded directly to the security office. Security personnel have a complaint log sheet they will use to document any complaints received. All security personnel have been instructed to notify the Plant Manager in the event an odor complaint is received at the plant. The Plant Manager or another member of the plant management team will immediately perform an investigation of the plant grounds to determine the potential source of the odor. After hours contact information can be found in Section 8.0.

Any odor complaint received at the plant will be investigated and documented in this plan under *Appendix C*. An odor complaint form will be filled out for each odor complaint received from the State or directly at the Plant. Each log will detail the time, date, source, and specific details (provided by VDEQ or complaint generator) of each odor complaint. Each entry will document the investigation as it pertains to each subsection of Section 7 of this plan. The log will contain the results of the investigation for each of the seven odor source areas, Team Members/Departments involved and, if possible, any corrective actions taken to prevent a reoccurrence of the odor complaint. Every response sent to the State to notify the results of the investigations will also follow the above format. This appendix also contains a flow chart for investigating odor complaints in accordance with this plan.

As a result of increased odor complaints VDEQ reserves the right to inspect the facility to ensure the contents of this plan are being implemented. Inspection reports will be maintained in *Appendix A*

7.0 POTENTIAL ODOR SOURCE CONTROL AREAS

Process Areas:

7.1 LIVE RECEIVING

Area Description

The Live Receiving area located on the eastern side of the plant is where livestock is temporarily stored and unloaded into the plant for processing. Livestock trailers are stationed on the Live Receiving pad where individual cages are unloaded via forklift and transferred to the plant. Each trailer may contribute to the overall livestock odor from the plant. Approximately 30-40 trailers are received throughout the production shifts. This area may contribute to passing odors but is not expected to be a major source of on-going odor concerns. Below are Best Management Practices (BMP's) identified to prevent or minimize odors from this area.

Best Management Practices

- Materials that fall to the ground are picked up and/or dry-swept several times each shift and as needed to ensure good house keeping.
- Process areas that typically receive and manage materials are equipped with trench drains and secondary containment structures (discharged to WWTP). Areas are washed with high-pressure waste hoses at the minimum rate of once per workday, usually occurring at the end of the sanitation shift. Washdowns are recorded on a daily log sheet. The CEM is responsible for the inspection/washdown log.
- Trench drains and pad are inspected during each washdown to ensure that liquids do not "pool" and the flow to and through trenches remains unrestricted. Pad repair and trench cleanout will occur as needed and as soon as possible based on findings from daily washdowns and inspections.
- "Dead On Arrival" (DOA) birds are picked up several times each shift and are disposed in the Offal Room. Alternatively, small (handled by forklift) containers may be used to hold DOAs until the end of a shift. The contents of the container are then dumped into an Offal Trailer.

7.2 PET FOOD DEPARTMENT

Area Description

The Pet Food Dept. is located on the northern end of the plant. Byproducts of the production process such as bird frames, eviscerate, etc. are ground and formed into frozen blocks to be used as pet food additives. The Pet Food Dept. maintains a loading dock on the north western side of the facility used to load outgoing materials from the Pet Food process. The Pet Food Dept. also has exhaust fans on the northern edge of the plant that facilitates air exchange. **The fresh pet food loading pad is no longer operational and does not contribute to odor issues.** Below are Best Management Practices (BMP's) identified to prevent or minimize odors from this area.

Best Management Practices

- Contaminated condensate or trailer drainage drains from the loading dock pad to a drop inlet that drains to the WWTP. The loading dock pad is washed down at a minimum of once per day. Wash down and inspection of the pad is recorded on a daily log sheet. Inspection will identify impedances to the flow of water to the drain and pooling water (clogged drain, cracks in pavement). Pad repair and drain cleanout will occur as needed and as soon as possible based on findings from daily washdowns and inspections. Sufficient water flow is added to the drop inlet to ensure any potential odor causing material is washed down the sewer to the WWTP.

This area is not considered a contributor to the overall odor perceived at the Tyson Foods plant. However, every effort is made to keep the area clean and free from odor causing materials.

7.3 OFFAL/EVISCERATION DEPARTMENT

Area Description

The Offal room is a part of the Evisceration Department. Bird frames, heads, feathers, and eviscerate from the plant process are mechanically loaded into Offal Trailers staged inside the Offal Room. The nature of the process generates some waste water that drains into the trailers with the Offal. The free liquid from Offal and Feather Trailers is drained inside the Offal Room while loading the Trailers in order to reduce the exposure of this liquid to the atmosphere. This excess water is drained to the WWTP.

Approximately 10-12 Offal and Feather trailers are removed from the facility each day. Throughout the production day, offal trailers are shipped every 3-4 hours and the feather trailers every 8 hours. Below are Best Management Practices (BMP's) identified to prevent or minimize odors from this area.

Best Management Practices

- Valley Protein, Inc. is the company contracted by Tyson Foods to haul the Offal/Feather trailers to their rendering facility in Emporia, VA. Every effort is made to ensure each trailer has a blood storage tank in order to reduce the amount of blood draining to the WWTP, where excessive blood can be a contributor to odor.
- Blood from Blood Storage Tanks inside the plant is pumped to Offal Trailers equipped with Blood Storage Tanks. On rare occasions, there are trailers without blood storage tanks and excess blood must be deposited on the Offal or Feather trailers. Trailers without blood tanks are recorded on a daily log sheet to be maintained by the CEM.
- Full trailers are pulled to the Offal Pad adjacent to the DAF/Wet Well #1 Building. Free liquid may also be drained on the Offal Pad by drivers to make adjustments for weight (per DOT Regulations).
- Drainage on the pad is thoroughly washed down with a high-pressure hose at least twice per day, and more often if necessary to ensure good house keeping. Inspection of the pad for cracks and impedances to drainage will accompany each washdown. Washdown and inspection will be recorded on a daily log sheet to be maintained by the CEM. Necessary repairs will be made as soon as possible.
- WWTP personnel constantly monitor the offal pad area and will notify the CEM of any unusually strong odors that may require additional washdown.
- Once a month the drainage pad will be thoroughly cleaned to remove any residual material on the pad.

The offal pad area is not considered a contributor to the overall odor perceived at the Tyson Foods plant. However, every effort is made to keep the area clean and free from odor causing materials

7.4 WASH BAY/BIRD CAGE WASHING

Area Description

Currently, there is not an active bird cage operation at the plant.

7.5 REFRIGERATED TRUCK STORAGE PAD

Area Description

Refrigerated trucks are stored on a concrete pad located on the north western edge of the property. Condensate from the trailer drains into a concrete culvert that drains to a drop inlet that flows to the WWTP. During dry, warm periods the culvert can be a source of odors. This excess water is drained to the WWTP. Below are Best Management Practices (BMP's) identified to prevent or minimize odors from this area.

Best Management Practices

- Outside maintenance and yard personnel constantly monitor the offal pad area and will notify the CEM of any unusually strong odors that may require additional washdown.
- The culvert is officially inspected twice per week (once per week in winter) to prevent the accumulation of debris and odor causing material. Inspections will be recorded on a log sheet to be maintained by the CEM.
- During warm weather months the culvert will be washed twice per week (once per week in the winter) or more frequently if necessary to keep the area free of odor causing material. Washdowns will be recorded on a log sheet to be maintained by the CEM.
- The catch basin at the end of the culvert is officially inspected twice per week (once per week in winter) or more frequently if necessary to keep the wash down water free flowing and to keep odor causing solids from accumulating in the basin. Inspection will be recorded on a log sheet to be maintained by the CEM.

Wastewater Treatment Facilities:

7.6 WASTE SLUDGE LAGOON

Area Description

Waste activated sludge (WAS) is generated during the wastewater treatment process. Activated sludge that is not reused in the treatment process is wasted to a storage lagoon located on the northern edge of the property at the WWTP. Due to accumulation of solids, once per approximately 8 months the lagoon is pumped down to maintain

operations. The WAS lagoon cleanout typically takes about 5 working days . Below are Best Management Practices (BMP's) identified to prevent or minimize odors from this area.

Best Management Practices

- VDEQ will be notified prior to cleanout activities to inform them in the event of public complaints, and cleanout will be recorded on a log sheet. The CEM will maintain the log.
- To minimize public contact with perceived nuisance odors, mixing of lagoon contents during sludge removal/clean out will be conducted so the jet-spray nozzle is positioned as close to the surface of the sludge as possible.
- Aeration occurs on an as-needed basis and Aerator operation will be recorded on a log sheet.
- To minimize public contact with perceived nuisance odors, manual change over from Settling/decant stage, to mixing/aerating stage, will be performed between the hours of 1:00 a.m. and 3:00 a.m. A memo outlining lagoon procedures can be found in Appendix D.
- WWTP personnel and management continuously monitor the WAS area for strong or unusual odors. In the event of a strong odor being detected, WWTP personnel will contact the WWTP Supervisor and/or CEM to immediately investigate and attempt to resolve the problem.

7.7 DISSOLVED AIR FLOTATION (DAF)

DAF sludge is generated at the DAF Building and consists primarily of fats and greases from wastewater generated during the poultry process. Fats and greases are separated from wastewater and pumped directly to a tanker trailer located on the Offal Pad. Sludge is loaded into a tanker truck to be shipped offsite on a daily basis for rendering. Below are Best Management Practices (BMP's) identified to prevent or minimize odors from this area.

Best Management Practices

- DAF sludge will be managed in a manner so as to limit the amount of time the material is stored on site. Tyson Foods, Inc. owns the tanker trailers so that we can better manage the schedule of loading DAF tankers.
- The driver should pull the first DAF sludge tanker early in the morning to minimize potential odors with commuters that travel past the plant.
- Documentation of the loading times and the time the tanker is taken offsite are kept in the DAF log located in the DAF building. The CEM is responsible for the integrity of the DAF log, and will recommend training or corrective action to WWTP personnel and drivers unfamiliar with DAF logging procedure and BMP's.
- After the tanker has been removed, the on-duty WWTP Operator inspects the area and washes down any spilled DAF sludge to Wet Well #1. Inspection and washdown will be recorded on the daily log sheet. The CEM is responsible to maintain the DAF log.
- A detailed operations log has been developed for the DAF system. This log details all functions of the DAF unit as well as how sludge is managed and sent out. The WWTP Supervisor is responsible for this log

The DAF area is not considered a significant contributor to the overall odor perceived outside the Tyson Foods plant. However, every effort is made to keep the area clean and free from odor causing materials. The DAF silos are no longer operational and do not contribute to odor problems. DAF silos will be cleaned periodically to remove residue.

7.8 7-DAY FLOW EQUILIZATION BASIN (7-day FEB)

The 7-day FEB is used to regulate the flow of wastewater through the WWTP. In accordance with our VPDES Permit, and in order to minimize perceived nuisance odors, the contents of the Basin are mixed and aerated continuously. The Basin is pumped down as low as possible each week to minimize atmospheric contact, and prepare for the upcoming production week.

Blood loading to the 7-day FEB can be a contributor to perceived odor issues at the plant. Therefore, it is important to manage blood from the plant in a manner to prevent excessive loading to the FEB

Best Management Practices

- Chlorine tablets are added to Wet Well #3 via a floating basket to help disinfect the sanitary flow that collects in WW3. This is done prior to the FEB to help reduce the potential for odor causing entering the FEB.
- The FEB aeration system shall be managed to maintain a dissolved oxygen level of 1.5 – 2.0 mg/L. The aeration system is made up of three blowers used to keep the FEB thoroughly mixed and fresh. Two blowers are always in operation with the third blower designated for a backup. As the level in the FEB rises throughout the production week, the third blower will be used to maintain the dissolved oxygen level at a range of 1.5 – 2.0 mg/L.

8.0 CONTACT/NOTIFICATION INFORMATION

The primary contact for receiving odor complaints at the plant is the Complex Environmental Manager. Any complaints received by other Team Members should be either forwarded to the CEM or documented and forwarded to the CEM for investigation. If the CEM is not available efforts should be made to contact other members of the Odor Control Team to investigate any on-going odor complaints.

Odor Control Team:

Complex Environmental Manager: Tim Crum	Office: Ext. 305 Page: 804-997-5259 Home: 804-440-5404
Plant Manager: Bryan French	Office: Ext 243 Cell: 804-731-4374
WWTP Manager: Frank Stokes	Office: Ext. 256 Cell: 804-248-2122
Evisceration Manager – Night Shift: DeWayne Morgan	Office: Ext. 221
General Production Manager Jeffrey Duke	Office: Ext. 209
Pet Food Manager: Harold Crawford	Office: Ext. 323

After Hours Contact Information:

Notify Plant Manager in the event odor complaint is received during weekend hours or when plant is not operating. If Plant Manager is not available call the Complex Environmental Manager or WWTP Manager until someone is reached.

VDEQ Contact information:

Tyson will contact VDEQ to notify them of any upset in the plant that may lead to an increase in potential nuisance odors. VDEQ will also be contacted in the event any odor complaints are received here at the plant.

In the event that any affected facility or related air pollution control equipment malfunctions in a manner that may cause **excess emissions for more than one hour**, a **Tyson manager will contact DEQ by phone within four hours and provide a written statement within two weeks** detailing all pertinent facts including the estimated duration of the breakdown.

VDEQ Piedmont Regional Office:

Contact Name: Chuck Turner
Title: Air Compliance Manager
Phone Number: 804-527-5173

Contact Name: Todd Alonzo
Title: Air Compliance Inspector, Sr.
Phone Number: 804-527-5003

PAD WASHDOWN AND INSPECTION REPORT

<u>Area</u>	<u>Date/Time</u>	<u>Initials</u>	<u>Wash</u>	<u>Inspection Notes (Potholes/Drain Clogs)</u>
Live Receiving				
Pet Food				
No Blood Tank???				
(Note Date and Time)				

PAD WASHDOWN AND INSPECTION REPORT

<u>Area</u>	<u>Date</u>	<u>Initials</u>	<u>Wash</u>	<u>Inspection Notes (Potholes/Drain Clogs)</u>
Live Receiving				
Pet Food				
No Blood Tank???				
(Note Date and Time)				

PAD WASHDOWN AND INSPECTION REPORT

<u>Area</u>	<u>Date</u>	<u>Initials</u>	<u>Wash</u>	<u>Inspection Notes (Potholes/Drain Clogs)</u>
Live Receiving				
Pet Food				
No Blood Tank???				
(Note Date and Time)				

Washdowns, Inspections, and Tankless Trailers must be recorded daily. Deliver Copy to CEM.

[illegible]

At the end of each month, Log must be submitted to Tim Crum, Complex Environmental Manager

REFRIGERATED TRUCK PAD WASHDOWN LOG

[illegible]

Enter Time, Date, and Initials. Place check mark in "Washdown" column. Answer "Yes" or "No" for Inspection of Drain and Culvert area

WASHDOWN/INSPECTION SHALL OCCUR ONCE PER WEEK (Twice in Summer) AT A MINIMUM

At the end of each month, Log must be submitted to Tim Crum, Complex Environmental Manager

ODOR COMPLAINT INFORMATION SHEET

If a resident calls with an odor complaint fill out the below questionnaire. After the call is complete follow the notification list below.

Date: _____

Time: _____

Resident Name: _____

Resident Contact #: _____

Resident Address: _____

* If resident doesn't want to give address, ask for location relative to Plant *

Weather Conditions:

Temperature: _____ Sunny: _____ Cloudy: _____ Rain: _____

Wind Direction: _____ * Boneyard is north *

Ask resident to describe odor and time odor began:

If complaint is received after normal business hours contact a General Production Manager (DeWayne Morgan or Jeffery Duke). Forward the resident to the GPM.

If a GPM is not available, fill out the above information and tell them that the Environmental Manager will contact them.

If complaint is received on the weekend inform resident you have taken their information, will contact Plant Management and someone will contact them within 48 hours.

Notify in order: Tim Crum 997-5259

Bryan French 731-4374

Darron Lockhart 731-3477

Place a copy of this form in the box for Tim Crum, Complex Environmental Manager.

ODOR COMPLAINT LOG

Complaint Tracking #: _____

Date/Time Received: _____

Received By: _____ Received From: _____

Possible Source: _____ Department: _____

Investigation Details:

Live Receiving:

Pet Food Dept:

Offal/Evisceration Dept:

Refrigerated Truck Storage Pad:

Waste Sludge Lagoon:

DAF Sludge:

7-Day FEB:

Corrective Actions/DEQ Notification:

Investigator Signature: _____ Date: _____